

# Data Sheet

## Fujitsu PRIMERGY BX920 S2 Dual Socket Server Blade

Universal dual socket server blade with high computing and I/O performance in a small form factor

The PRIMERGY BX Blade Servers are the ideal choice for data center solutions of today and tomorrow. Our blade servers provide maximum performance and maximum redundancy, but with only minimum space requirements, low power consumption and a reduction in the time and effort required for cabling. The PRIMERGY BX system family is designed to share components between chassis in order to react quickly and easily to changing business requirements. Storage and server blades can be added without any extra effort, as would be needed when cabling or adding management software. You can use the same applications, rely on the same server and storage components and establish connections to the same networks. The PRIMERGY BX Blade Servers are flexible and have complete control via a central administration instance that is redundant in design; they minimize administrative time and effort, freeing you of time-consuming administration tasks. Our build-to-order process ensures that only completely installed and previously tested solutions are supplied, which have been precisely adapted to individual requirements and which will grow with future business requirements.

### PRIMERGY BX920 S2

The PRIMERGY BX920 S2 server blade uses the CPUs of the Intel® Xeon® processor 5500 and 5600 series and thus the latest and most powerful members of the Xeon® family. Utilizing the QuickPath architecture and special on-chip memory controllers, the CPUs of the Intel® Xeon® processor 5600 series easily exceed the capacities of the previous generation. The BX920 S2 server blade can host two of these processors, with up to two hard drives, 144 GB of DDR3 memory as well as two dual-channel Intel 82575 Gigabit

Ethernet controllers. The protection against data loss can be increased via the RAS function (now available) called channel sparing of the main memory modules in conjunction with CPUs from the Intel® Xeon® processor 5600 series. The BX920 S2 is ideal for virtualization using hypervisors such as VMware® ESXi, Microsoft Hyper-V™, or Citrix XenServer™. In addition, the PRIMERGY BX920 S2 blades are equipped with the state-of-the-art integrated Remote Management Controller (iRMC S2) and - with its wide range of processor, disk and memory options, it provides IT managers with the performance and scalability they need for all their data center applications. The optimal and secure support of I/O-intensive applications, such as terminal servers is ensured by the optional use of a RAID controller with write-back cache and BBU.



# Features and Benefits

Main Features	Benefits
<p><b>Top performance thanks to processor technology</b></p> <ul style="list-style-type: none"> <li>■ Two Dual-Core, Quad-Core or Six-Core CPUs with Intel® Xeon® processor 5500 or 5600 series with Turbo Boost technology, Demand Based Switching, QuickPath Interconnect (QPI) and internal Memory Management Unit. The Intel® QuickPath architecture memory controllers provide the BX920 S2 with a high-speed bandwidth of up to 25 Gigabytes/second (GB/s) between the individual processors, the processors and the memory, as well as between the processors and the I/O hub.</li> </ul>	<ul style="list-style-type: none"> <li>■ Tunable performance with consistent power consumption and even heat dissipation</li> </ul>
<p><b>Integrated management</b></p> <ul style="list-style-type: none"> <li>■ Management via the integrated Remote Management Controller (iRMC S2) enables access to each server and extensive control, even at remote locations. The integrated Pre-failure Detection and Analysis function provides reliable operations in all circumstances.</li> </ul>	<ul style="list-style-type: none"> <li>■ Easy and reliable management and control.</li> </ul>
<p><b>Variable system start options</b></p> <ul style="list-style-type: none"> <li>■ Multiple server boot options, including local HDD or SSD, via the network, or USB solid state disk makes this server ideal for any application. It is an excellent platform for both virtualized and physical environments.</li> </ul>	<ul style="list-style-type: none"> <li>■ Multiple usage options enable integration in each environment.</li> </ul>
<p><b>Multiple I/O connections</b></p> <ul style="list-style-type: none"> <li>■ Two integrated dual-channel Intel® 82575 Gigabit Ethernet controllers are standard. Two PCI Express 2.0 Mezzanine slots for a combination of quad-channel 1 Gb or dual-channel 10 Gb Ethernet, dual-channel 8 Gb Fibre Channel, dual-channel 10 Gb CNA (FCoE), and dual-channel 40 Gb Infiniband offer excellent I/O connection options via the high-performance Midplane of the Blade Server chassis. The high I/O capacity of the server blade allows optimal use of multiple I/O protocols, ensuring smooth operations for demanding applications</li> </ul>	<ul style="list-style-type: none"> <li>■ I/O connectivity with the best-in-class rating.</li> </ul>
<p><b>Fast and secure data access</b></p> <ul style="list-style-type: none"> <li>■ SAS 2.0 RAID 0,1 Mezzanine card with a 512 MB write-back cache and an optional battery backup unit (as soon as it has been released).</li> </ul>	<ul style="list-style-type: none"> <li>■ Meets highest throughput and security requirements when accessing internal data storage.</li> </ul>

# Technical details

## Mainboard

Mainboard type	D 3030
Chipset	Intel® 5500
Processor quantity and type	1 - 2 x Intel® Xeon® processor E5500 series / Intel® Xeon® processor E5600 series / Intel® Xeon® processor L5600 series / Intel® Xeon® processor X5600 series
Processor	<p>Intel® Xeon® processor E5503 (2C/2T, 2.00 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)</p> <p>Intel® Xeon® processor E5506 (4C/4T, 2.13 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)</p> <p>Intel® Xeon® processor E5507 (4C/4T, 2.26 GHz, SLC: 4 x 256 KB, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 80 W)</p> <p>Intel® Xeon® processor E5603 (4C/4T, 1.60 GHz, SLC: -, TLC: 4 MB, Turbo: No, 4.8 GT/s, Mem bus: 1066 MHz, 80 W)</p> <p>Intel® Xeon® processor E5606 (4C/4T, 2.13 GHz, SLC: -, TLC: 8 MB, Turbo: No, 4.8 GT/s, Mem bus: 1066 MHz, 80 W)</p> <p>Intel® Xeon® processor E5607 (4C/4T, 2.26 GHz, SLC: -, TLC: 8 MB, Turbo: No, 4.8 GT/s, Mem bus: 1066 MHz, 80 W)</p> <p>Intel® Xeon® processor E5620 (4C/8T, 2.40 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)</p> <p>Intel® Xeon® processor E5630 (4C/8T, 2.53 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)</p> <p>Intel® Xeon® processor E5640 (4C/8T, 2.66 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 80 W)</p> <p>Intel® Xeon® processor E5645 (6C/12T, 2.40 GHz, SLC: -, TLC: 12 MB, Turbo: 1/1/1/2/2, 5.86 GT/s, Mem bus: 1333 MHz, 80 W)</p> <p>Intel® Xeon® processor E5649 (6C/12T, 2.53 GHz, SLC: -, TLC: 12 MB, Turbo: 1/1/1/2/2, 5.86 GT/s, Mem bus: 1333 MHz, 80 W)</p> <p>Intel® Xeon® processor L5609 (4C/4T, 1.86 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: No, 4.8 GT/s, Mem bus: 800 MHz, 40 W)</p> <p>Intel® Xeon® processor L5630 (4C/8T, 2.13 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 1/1/2/2, 5.86 GT/s, Mem bus: 1066 MHz, 40 W)</p> <p>Intel® Xeon® processor L5640 (6C/12T, 2.26 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/3/4/4, 6.4 GT/s, Mem bus: 1333 MHz, 60 W)</p> <p>Intel® Xeon® processor X5650 (6C/12T, 2.66 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)</p> <p>Intel® Xeon® processor X5660 (6C/12T, 2.80 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)</p> <p>Intel® Xeon® processor X5667 (4C/8T, 3.06 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)</p> <p>Intel® Xeon® processor X5670 (6C/12T, 2.93 GHz, SLC: 4 x 256 KB, TLC: 12 MB, Turbo: 2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)</p> <p>Intel® Xeon® processor X5672 (4C/8T, 3.20 GHz, SLC: -, TLC: 12 MB, Turbo: 2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)</p> <p>Intel® Xeon® processor X5675 (6C/12T, 3.06 GHz, SLC: -, TLC: 12 MB, Turbo: 2/2/2/3/3, 6.4 GT/s, Mem bus: 1333 MHz, 95 W)</p>
Memory slots	9 (6 slots on CPU 1, 3 slots on CPU 2)
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	2 GB - 144 GB

<b>Memory protection</b>	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Memory Mirroring support Hot-spare memory support
<b>Memory Modules Independent Mode</b>	2 GB (1 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 2 GB (1 module(s) 2 GB) DDR3, unbuffered, ECC, 1333 MHz, PC3-10600, DIMM 2 GB (1 module(s) 2 GB) DDR3 LV, unbuffered, ECC, 1333 MHz, PC3-10600, DIMM 4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 16 GB (1 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM
<b>Memory Modules Mirrored Mode</b>	4 GB (2 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 8 GB (2 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 8 GB (2 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 16 GB (2 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 16 GB (2 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 32 GB (2 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM
<b>Memory Modules Spare or Performance Mode</b>	6 GB (3 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 12 GB (3 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 12 GB (3 module(s) 4 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 24 GB (3 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600, DIMM 24 GB (3 module(s) 8 GB) DDR3 LV, registered, ECC, 1333 MHz, PC3-10600, DIMM 48 GB (3 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500, DIMM
<b>Interfaces</b>	
<b>USB ports</b>	4 x USB at the front via special cable
<b>Graphics (15-pin)</b>	1 x VGA at the front via special cable
<b>Serial connection</b>	1 x RS232 (9-pin) at the front via special cable
<b>LAN / Ethernet (RJ-45)</b>	4 x Gbit Ethernet via Midplane to Ethernet Connection Blade
<b>Service LAN (RJ45)</b>	Service LAN traffic can be switched to shared onboard Gbit LAN port
<b>I/O controller on board</b>	
<b>RAID Controller</b>	Integrated SAS RAID 0/1 for HDD's
<b>LAN Controller</b>	2 x Intel® 82575, 2 x 10/100/1000 Mbit/s Ethernet, Intel® VT-c (includes I/OAT, VMDq)
<b>Remote Management Controller</b>	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller)
<b>Trusted Platform Module (TPM)</b>	Infineon / 1.2 (option)
<b>Slots</b>	
<b>PCI-Express 2.0 x8</b>	2 x BX900 Mezzanine Card
<b>Drive bays</b>	
<b>Hard disk bays</b>	2
<b>Operating panel</b>	
<b>Operating buttons</b>	On/off switch ID button
<b>Status LEDs</b>	Power (amber / green) System status (amber) LAN connection (green) Identification (blue) CSS (yellow)

**BIOS****BIOS features**

Local and remote update via ServerView Update Manager  
 Online update tools for main Windows and Linux versions  
 SMBIOS V2.6  
 Remote PXE boot support  
 Remote iSCSI boot support

**Operating Systems and Virtualization Software****Certified or supported operating systems and virtualization software**

Microsoft® Windows® Server 2008 Datacenter  
 Microsoft® Windows® Server 2008 Enterprise  
 Microsoft® Windows® Server 2008 Standard  
 VMware vSphere™ 4.1  
 VMware vSphere™ 4.1 Embedded  
 VMware vSphere™ 4.0 Installable  
 VMware vSphere™ 4.0  
 VMware vSphere™ 4.0 Embedded  
 VMware vSphere™ 4.0 Installable  
 Novell® SUSE Linux Enterprise Server 11  
 Novell® SUSE Linux Enterprise Server 10  
 Novell® SUSE Linux Enterprise Server 10 with XEN  
 Red Hat® Enterprise Linux 6  
 Red Hat® Enterprise Linux 5  
 Red Hat® Enterprise Linux 5 with XEN  
 Citrix® XenServer®

**Operating system release link**

<http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421>

**Operating system notes**

Support of other Linux derivatives on demand

**Server Management****Standard**

ASR&R Automatic Server Recovery and Restart  
 PDA Prefailure Detection and Analysis  
 ServerView Suite:  
 SV Installation Manager  
 SV Operation Manager  
 SV RAID Manager  
 SV Update Management  
 SV Power Management  
 SV Agents  
 iRMC S2 Advanced Pack  
 Online update packages for BIOS, firmware drivers and ServerView Agents  
 ServerView Integration solutions for Microsoft SMS, MOM, SCOM, SCCM and Altiris  
 Deployment Solution ServerView Deployment Manager (fully functional 30-day trial version)

**Option**

ServerView VIOM - Virtual IO Manager  
 ServerView Remote Management  
 ServerView Integration for Tivoli TEC®, Tivoli NetView, HP NNM and HP Operations Manager

**Server Management notes**

Regarding operating system dependencies and product details for ServerView Suite software products see dedicated product datasheets.

**Dimensions / Weight****Dimensions (W x D x H)**

45 x 500 x 210 mm

**Weight**

5.75 kg

**Weight notes**

Actual weight may vary depending on configuration

**Environmental****Temperature note**

In accordance with the corresponding PRIMERGY BX900 system unit

**Operating environment**

FTS 04230 – Guideline for Data Center (installation locations)

**Operating environment Link**

<http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe>

**Electrical values**

**Compliance**

Germany	GS
Europe	CE Class A *
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Compliance notes	In combination with corresponding PRIMERGY BX system unit There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request. * Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates/default.aspx">https://sp.ts.fujitsu.com/sites/certificates/default.aspx</a>

## Components

<b>Hard disk drives</b>	SSD SATA, 3 Gb/s, 64 GB, SLC, hot-plug, 2.5-inch, enterprise SSD SATA, 3 Gb/s, 32 GB, SLC, hot-plug, 2.5-inch, enterprise HDD SATA, 3 Gb/s, 500 GB, 7200 rpm, hot-plug, 2.5-inch, business critical HDD SATA, 3 Gb/s, 320 GB, 5400 rpm, hot-plug, 2.5-inch, economic HDD SATA, 3 Gb/s, 160 GB, 7200 rpm, hot-plug, 2.5-inch, business critical HDD SATA, 3 Gb/s, 160 GB, 5400 rpm, hot-plug, 2.5-inch, economic HDD SAS, 6 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise HDD SAS, 6 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise HDD SAS, 6 Gb/s, 146 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise HDD SAS, 6 Gb/s, 73 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
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<b>Hard disk notes</b>	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.
<b>Mezzanine Cards</b>	Fibre Channel Mezzanine Card 2 x 8 Gb Emulex (MC-FC82E), PCIe x4 CNA Mezzanine Card 2 x 10 Gb Emulex (MC-CNA102E), PCIe Gen2 x8 Ethernet Mezzanine Card 2 x 10 Gb Fujitsu , PCIe Gen2 x8 Ethernet Mezzanine Card 4 x 1 Gb Fujitsu , PCIe x4 InfiniBand CX2 Mezzanine Card 2 x 40 Gb Mellanox , PCIe x8 SAS RAID Mezzanine Card x 6 Gb Fujitsu (),

**Warranty**

<b>Standard Warranty</b>	3 years
<b>Service level</b>	(depending on country)
<b>Maintenance and Support Services - the perfect extension</b>	
<b>Recommended Service</b>	7x24, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
<b>Spare Parts availability</b>	5 years
<b>Service Weblink</b>	<a href="http://ts.fujitsu.com/Supportservice">http://ts.fujitsu.com/Supportservice</a>

# More information

## Fujitsu platform solutions

In addition to Fujitsu PRIMERGY BX920 S2, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

## Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

## Computing Products

[www.fujitsu.com/global/services/computing/](http://www.fujitsu.com/global/services/computing/)

## Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

## More information

Learn more about Fujitsu PRIMERGY BX920 S2, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.

<http://ts.fujitsu.com/Primergy>

## Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.

Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT.

Please find further information at <http://www.fujitsu.com/global/about/environment/>



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